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EXAMINER

CHUNG, JI YONG DAVID

ART UNIT	PAPER NUMBER
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2143

DATE MAILED: 05/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/027,618	Applicant(s) MERKIN, CYNTHIA M.	
	Examiner Ji-Yong D. Chung	Art Unit 2143	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 2/27/2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Response to Remarks

1. Applicant's arguments and amendments filed on February 27, 2006 have been carefully considered. The Office believes that they do not yet place the claims in condition for allowance, for the reasons below.

The applicant has incorporated limitations related to a controller "coupled between a processor bus and a local bus," in the independent claims. Reciting passages in Kosugi (the passages which have been cited in the prior Office action) in Remarks, the applicant has highlighted the term "the remote maintenance server." The applicant argues that the system controller in the instant application is local. Apparently, the applicant is trying to distinguish the claimed subject matter based on the distinction between local and remote controllers.

Based on the Remarks, it seems that the applicant's misunderstands the rejections based on Kosugi's system. As provided in the previous Office actions, the controller 88 in Fig. 2 was cited to be "system management controller." The controller 88 is *local* to the system that is performing the logging, as is the system controller in claim 1.

Note that, Kosugi monitors any errors (which would presumably include the failure to complete a task, such as writing to a log).

Distinguishing the Claims from the Cited Prior Art References

2. In claim 1, the term “event log” is explicitly mentioned twice. In the prior Office rejections, the term “event log” is interpreted differently in the two instances it appears in the claim. In the first instance, the event log is interpreted as a system log. In the second instance, the event log is interpreted as “a copy of the original event log.”

If the applicant peruses the prior Office action, the applicant should see that the event log corresponds to Kogusi’s system log. In Kosugi’s system, when the “event log” is written by the “controller,” the event log is written not to the system log (i.e., BIOS log). In fact, “writing the event log” consists of taking the original system log, copying it, and sending it as an email attachment. The event log is “written” in a sense, but in a way different than the first time the term appears in claim 1.

If the independent claims were amended so that writing the event log can only be interpreted in one way, the independent claims maybe distinguished over Kosugi.

There is one more issue that the applicant may need to address.

The Office has conducted further searches on the claimed subject matter. The Office believes that there are technologies which represent further 35 U. S. C. 103 or 102 hurdles. The areas are related to mirrored file / dual logging systems. These systems generally maintain two copies of logs. When there is a log write failure in the primary log, the second log takes over;

Art Unit: 2143

any error intended to be written to the first log (still in memory) is accessed and written to the second copy of the event log. In many systems, programming techniques ensure that even though there are two disks that support the log writes, the program sees only "one" log file.

In view of the above, thus, the applicant needs take into consideration whether amended claims would read on Windows NT (with error logs) having mirrored disks, as well as systems with two copies of synchronized error logs, each log on a different disk.

It is clear that mirroring / dual logging system are different from the system described in the instant specification, and that the claims maybe further amended to distinguish the claimed subject matter from them.

The Office has not found, other than what have been described above, any prior art references on which the claims, if properly amended, would read.

Telephone Interview

3. The Office, upon further review of the case, will contact the applicant's representative, to discuss the claims. Should the Office not contact the applicant's representative within reasonable time, the applicant is encouraged to contact the Office, for advancing the prosecution toward allowability.

Claim Rejections - 35 USC § 102

4 The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

5. **Claims 1, 3-17, 20, and 22-32** are rejected under 35 U.S.C. 102(e) as being anticipated by Kosugi et al. (Kosugi hereinafter).

With regard to **claim 1**, Kosugi shows the method comprising:

providing a computer system with a system management controller coupled between a processor bus and a local bus [See Fig. 2A, in which the line that represents the bus from the local CPU connects to the item 88 and another local bus];

configuring the system management controller to monitor a task of writing data to an event log, the task being executed by a Basic Input Output System (BIOS) program in response to the failure [See item 88, Fig. 2 for the system management controller. BIOS program is not explicitly spelled out. However, its existence within Kosugi can be inferred from the mention of BIOS log (see paragraph 0029), POST (see paragraph 0029), and the fact that CPU's are Intel Architecture (paragraph 0029) which use BIOS. The task of writing the log is performed by BIOS program ("BIOS log")];

monitoring the task for completion [See paragraph 0030, which indicates that the system controller is notified of errors in BOOT processing. In other words, it is monitoring BIOS sequence, which includes BIOS logging];

Art Unit: 2143

accessing the event data if the task fails to complete [See paragraph 0030. It describes system controller 88 accessing the BIOS log in non-volatile storage in the case of failure]; and *writing the event log via the system management controller in response to accessing the event data*. The BIOS log in nonvolatile memory 78 is transferred and written to nonvolatile memory 140 of the Server Management Support Board 36. See the end of paragraph 0034.

With regard to **claim 3**, Kogusi shows that monitoring the task comprises:

setting a configurable time of a watchdog timer, the task being configured to access the event data, and write the data to the event log in response to the event data, the task being completed within the configurable time set in the watchdog timer [See Figs. 7A and 7B and paragraph 0035 for the description of IMP board, which acts on behalf of the controller 88. The paragraphs 0035 and 0038 describe “configuring” (or setting) of the timers. The task of writing the event log has been discussed with respect to claim 1. Note that what is being written has to be “event data.”];

receiving an indication from the BIOS program on completion of the task [See POST diagnosis UNIT in item 100 (“BIOS”) in Fig. 3A. See Fig. 7A for problem notification process. Starting of BOOT (which is started by the BIOS) is used as notification that POST (which includes logging) has terminated].

With regard to **claim 4**, Kosugi shows *that the task fails to complete when the task fails to receive the indication from the BIOS program*. See step S4 in Fig. 7A, for when the timer expires before BOOT. See paragraph 0035 for various timer expirations descriptions.

With regard to **claim 6**, Kosugi shows that *the event data is stored in a memory of the computer system by a controller device included in the computer system*. See Fig. 2A, which shows the nonvolatile memory 78, which is on the computer system. Paragraph 0034 indicates that the event log is stored in nonvolatile memory 78. Note that CPU, items 64-1, (“controller device”) executes BIOS (and thus BIOS logging)].

Claims 7 and 8 refer to two controllers: *memory controller and I/O controller*. Kosugi meet the limitations in two ways. First, note that CPU’s generally control memory and I/O. Therefore, Kosugi’s CPU can be viewed as both memory controller and I/O controller. Second, hardware specific memory controllers and I/O controllers are generally inherent in most motherboards (For example, see descriptions of Intel 865D, which are involved in writing of data to memory. Baseboard in Kosugi corresponds to motherboard].

With regard to **claim 9**, Kosugi shows that *the system management controller accesses the event data over a system bus of the computer system*. See Fig. 2A and PCI bus 66 as well as well I2C bus 84-1 and 84-2.

With regard to **claim 10**, Kosugi shows an *SMBus*. I2C Bus 84-1 is the SMBus.

With regard to **claim 11**, Kosugi shows *the system management controller writing the event log in response to accessing the event data*. The BIOS log in nonvolatile memory 78 is

Art Unit: 2143

transferred and written to nonvolatile memory 140 of the Server Management Support Board 36.

See the end of paragraph 0034.

With regard to **claim 12**, Kosugi shows that *writing the event log occurs over a system bus of the computer system*. See PCI bus 66 in Fig. 6A. Server Management Board 36 is implemented as a PCI board, and therefore it uses PCI bus.

With regard to **claim 13**, its limitation has been discussed with respect to claim 10.

With regard to **claim 14**, two of its limitations have not been discussed. They are:
configuring the watchdog timer to allow the BIOS program to complete in absence of a second failure. Kosugi shows this limitation in Fig. 7A. The flow chart shows that when a particular failure occurs twice, the steps in Fig. 7A are re-traversed. Specifically, note the path through S1, S2, S3, S5, S8 and S10, and then returning to S1. On the second traversal, the timer will be restarted again at S5.

determining whether the execution of the BIOS program caused the second failure, the second failure forcing the watchdog timer to expire. The expiration in S8, Fig. 7A indicates the trouble with booting and BIOS and thus the second failure.

With regard to **claim 15**, Kosugi shows that *the second failure is substantially similar to the first failure*. In traversing Fig. 7A diagram, the second failure (which is the same as the first one) will occur again and cause the reboot.

With regard to **claim 16**, Kosugi shows that *the second failure occurs while a processor included in the computer system operates in a SMM mode*. System Management Mode occurs during pre-boot. Fig. 7A shows that the second failure, at the second traversal of the steps in Fig. 7A, occurs prior to the start of the BOOT.

With respect to **claim 17**, except for amended portions, its limitations substantively restate the limitations of claims 1 and 3-16, but in apparatus form rather than in method form. The reasons for the rejections of claims 1 and 3-16 apply to the unamended portions of the limitations of claim 17.

With respect to claims 17's new limitation, *write the data to the event log if the BIOS program has not written the data to the event log*, Kosugi meets the limitation, because its data is written to the log whether or not BIOS program has not written data to the event log. In other words, data is still written to the log if BIOS program has not written to the event log.

With respect to **claim 20**, Kosugi shows the method comprising:

monitor a task of writing data to an event log via the system management controller [], the task being executed by a Basic Input Output System (BIOS) program in response to the failure [See item 88, Fig. 2 for the system management controller. BIOS program is not explicitly spelled out. However, its existence within Kosugi can be inferred from the mention of BIOS log (see paragraph 0029), POST (see paragraph 0029), and the fact that CPU's are Intel Architecture (paragraph 0029) which use BIOS. The task of writing the log is performed by

Art Unit: 2143

BIOS program (“BIOS log”). “Monitoring” is a generic function that is involved in any program];

monitoring the task for completion to determine whether the BIOS program was able to complete writing the data to the event log [[See paragraph 0030, which indicates that the system controller is notified of errors in BOOT processing. In other words, it is monitoring BIOS sequence, which includes BIOS logging];

accessing the event data if the task failed to complete [See paragraph 0030. It describes system controller 88 accessing the BIOS log in non-volatile storage in the case of failure]; and

writing the event log via the system management controller if the task failed complete [The BIOS log in nonvolatile memory 78 is transferred and written to nonvolatile memory 140 of the Server Management Support Board 36. See the end of paragraph 0034.]

In claim 20, the limitation referring to the system management controller has been discussed with respect to claim 1.

Claims 22-31 and 32 incorporate the limitations of corresponding claims 3-13, but in method form, rather than in apparatus form. The reasons for the rejection of claims 3-13 apply to claims 22-32.

Claim Rejections - 35 USC § 103

6. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Art Unit: 2143

7. **Claims 2, 18, 19, and 21** are rejected under 35 U.S.C. 103(a) as being unpatentable over Kosugi in view of Davis.

With respect to **claim 2**, Kosugi does not show that *the failure generates a system management interrupt and the BIOS program is triggered in response to the system management interrupt*. However, Davis shows the generation of both system interrupt and triggering of the timer interrupt in lines 12-37, column 4. Note that Kosugi shows the failure is written in BIOS log.

It would have been one of ordinary skill in the art at the time of the invention to use use interrupts to signal failure in Kosugi is that Davis suggests the use of interrupts for error detection in pre-boot operations. See lines 12-37, column 4.

Claims 18 and 19 substantively restate the limitations of claims 1-17, but in apparatus form rather than in method form. The reasons for the rejections of claims 1-17 apply to claims 18 and 19 with respect to its constituent limitations.

Note that Davis illustrates timer interrupt being set upon the first failure. The rationale for the obviousness rejection of claim 2 holds for claims 18 and 19.

Claim 21 substantively incorporates the limitations of claim 2, but in different words. The reasons for the rejection of claim 2 apply to claim 21.

Conclusion

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ji-Yong D. Chung whose telephone number is (571) 272-7988. The examiner can normally be reached on Monday-Friday 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wiley can be reached on (571) 272-3923. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2143

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Ji-Yong D. Chung
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